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|--|-------------|----------------------|-------------------------|------------------|
| APPLICATION NO.  | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO.     | CONFIRMATION NO. |
| 09/830,502   | 10/09/2001  | Francis Barany       | 19603/2615              | 8225             |
| Michael L Goldman Nixon Peabody Clinton Square P O Box 31051 |             |                      | EXAMINER                |                  |
|  |             |                      | STRZELECKA, TERESA E    |                  |
| Rochester, NY  | 14603       |                      | ART UNIT                | PAPER NUMBER     |
|  |             |                      | 1637                    |                  |
|  |             |                      | DATE MAILED: 11/13/2002 | h                |

Please find below and/or attached an Office communication concerning this application or proceeding.

| •   |   | Application No.                     | Applicant(s)                                       |  |  |  |
|---|---|-------------------------------------|--|--|--|--|
|   |   | 09/830,502                          | BARANY ET AL.                                      |  |  |  |
| Of  | fice Action Summary   | Examiner                            | Art Unit   |  |  |  |
|   |   | Teresa E Strzelecka                 | 1637   |  |  |  |
| The MAILING DATE of this communication appears on the cover sheet with the correspondence address Period for Reply  |   |                                     |  |  |  |  |
| A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 1 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.  - Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.  - If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.  - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.  - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).  - Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).  Status |   |                                     |  |  |  |  |
|   | onsive to communication(s) filed on   |                                     |  |  |  |  |
|   | · · ·   | is action is non-final.             |  |  |  |  |
| 3)☐ Since   |   |                                     |  |  |  |  |
| Disposition of  |   |                                     |  |  |  |  |
| 4) Claim(s) 1-47 is/are pending in the application.   |   |                                     |  |  |  |  |
| 4a) Of the above claim(s) is/are withdrawn from consideration.  |   |                                     |  |  |  |  |
| 5)∭ Claim   | (s) is/are allowed.   |                                     |  |  |  |  |
| 6)☐ Claim(s) is/are rejected.   |   |                                     |  |  |  |  |
| 7)∐ Claim   | (s) is/are objected to.   |                                     | ·  |  |  |  |
| •   | (s) <u>1-47</u> are subject to restriction and/or   | election requirement.               |  |  |  |  |
| Application Pa  | pers  |                                     |  |  |  |  |
| 9)☐ The specification is objected to by the Examiner.   |   |                                     |  |  |  |  |
| 10)☐ The dra  | awing(s) filed on is/are: a)□ acce  | pted or b)⊡ objected to by the Exar | niner.   |  |  |  |
| Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).   |   |                                     |  |  |  |  |
| 11) The proposed drawing correction filed on is: a) □ approved b) □ disapproved by the Examiner.  |   |                                     |  |  |  |  |
| If approved, corrected drawings are required in reply to this Office action.  |   |                                     |  |  |  |  |
| 12) The oath or declaration is objected to by the Examiner.   |   |                                     |  |  |  |  |
| Priority under 35 U.S.C. §§ 119 and 120   |   |                                     |  |  |  |  |
| 13) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).   |   |                                     |  |  |  |  |
|   | b) Some * c) None of:   |                                     |  |  |  |  |
|   | Certified copies of the priority document   |                                     |  |  |  |  |
| 2. Certified copies of the priority documents have been received in Application No  |   |                                     |  |  |  |  |
| 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)). * See the attached detailed Office action for a list of the certified copies not received.  |   |                                     |  |  |  |  |
| 14) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  |   |                                     |  |  |  |  |
| a) ☐ The translation of the foreign language provisional application has been received. 15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.   |   |                                     |  |  |  |  |
| Attachment(s)   |   |                                     |  |  |  |  |
| 1) Notice of Refe   | erences Cited (PTO-892)<br>ftsperson's Patent Drawing Review (PTO-948)<br>isclosure Statement(s) (PTO-1449) Paper No(s) _ | 5) Notice of Informal P             | (PTO-413) Paper No(s) latent Application (PTO-152) |  |  |  |

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## **DETAILED ACTION**

## Election/Restrictions

1. Restriction is required under 35 U.S.C. 121 and 372.

This application contains the following inventions or groups of inventions which are not so linked as to form a single general inventive concept under PCT Rule 13.1.

In accordance with 37 CFR 1.499, applicant is required, in reply to this action, to elect a single invention to which the claims must be restricted.

- Group I, claim(s) 1-9, drawn to a thermostable ligase with a fidelity 100-fold higher than T4 ligase and 6 fold higher than *Thermus thermophilus* ligase.
- Group II, claim(s) 10-14, drawn to a thermostable ligase with a fidelity 50-fold higher than T4 ligase and 5 fold higher than *Thermus thermophilus* ligase.
- Group III, claim(s) 15, drawn to a thermostable ligase with a fidelity 12 fold higher than *Thermus thermophilus* ligase.
- Group IV, claim(s) 16-31, drawn to an isolated nucleic acid encoding a thermostable ligase, DNA expression system and a host cell.
- Group V, claim(s) 32-47, drawn to method for detecting a target nucleotide sequence using the thermostable ligase.
- 2. The inventions listed as Groups I-III do not relate to a single general inventive concept under PCT Rule 13.1 because, under PCT Rule 13.2, they lack the same or corresponding special technical features for the following reasons: Luo et al. (Nucleic Acids Research, vol. 24, p. 3071-3078, 1996) teach a thermostable *Thermus thermophilus* DNA ligase with a fidelity about 10-fold higher than a wild-type ligase.

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3. Applicant is advised that the reply to this requirement to be complete must include an election of the invention to be examined even though the requirement be traversed (37 CFR 1.143).

4. Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Teresa E Strzelecka whose telephone number is (703) 306-5877. The examiner can normally be reached on M-F (8:30-5:30).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gary Benzion can be reached at (703) 308-1119. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 308-4242 for regular communications and (703) 305-3014 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0196.

TS November 12, 2002

> KENNETH R. HORLICK, PH.D. PRIMARY EXAMINER

> > 11/12/02